

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1 1.-10. (Canceled)

1 11. (Currently amended) A rapid diagnostic test system, comprising:
2 a single-use module, comprising:

3 a medium containing a labeling substance that comprises first
4 persistent fluorescent structures that emit light having a first frequency
5 and second persistent fluorescent structures that emit light having a
6 second frequency, wherein each of the first persistent fluorescent
7 structures is attached to a substance capable of binding the first
8 persistent fluorescent structure to a target analyte when a sample
9 containing the target analyte is applied to the medium;

10 a light source positioned to illuminate a target area and a control area
11 on the medium;

12 a first photodetector positioned to measure light of the first frequency
13 originating from the target area of the medium;

14 a second photodetector positioned to measure light of the second
15 frequency originating from the control area, wherein a signal from the
16 second photodetector indicating an intensity above a threshold level
17 indicates that the sample has passed through the target area; and

18 ~~an external~~ [a] terminal located on an external surface of the single-use
19 module for conductively receiving electrical power from a source
20 external to the single-use module for the light source, the first
21 photodetector, and the second photodetector; and

22 a reusable module having a receptacle into which the external terminal of the
23 single-use module can be inserted for providing the electrical power from the reusable
24 module to the single-use module and communicating test signals between the single-
25 use module and the reusable module.

1 12. (Previously presented) The system of claim 11, wherein the
2 reusable module implements a user interface capable of indicating a test result.

1 13. - 20. (Canceled)

1 21. (Previously presented) The system of claim 12, wherein the user
2 interface comprises a display for the test result.

1 22. (Previously presented) The system of claim 11, wherein the test
2 signals are electrical test signals.

1 23. (Previously presented) The system of claim 11, wherein the first
2 and the second persistent fluorescent structures comprise quantum dots.

1 24. (Canceled)

1 25. (Canceled)

1 26. (Previously presented) The system of claim 11, wherein the medium
2 comprises a lateral-flow strip for performing a binding assay, and the target area
3 contains an immobilized substance that binds to and holds a complex including one of
4 the first persistent fluorescent structures and the target analyte.

1 27. – 38. (Canceled)

1 39. (Previously presented) The system of claim 26, wherein the second
2 persistent fluorescent structures bind to the control area.

1 40. (Previously presented) The system of claim 11, further comprising:
2 a first color filter that transmit light of the first frequency to the first
3 photodetector and blocks other frequencies; and

4 a second color filter that transmit light of the second frequency to the second
5 photodetector and blocks other frequencies.

1 41. (Previously presented) The system of claim 11, wherein the control
2 area contains an immobilized substance that binds and retains to the labeling
3 substance.